

NAVAL WAR COLLEGE  
Newport, R.I.

OPERATIONAL ART 101; A PRIMER FROM PICASSO TO THE PERSIAN GULF.  
CREATING A MASTERPIECE OF LONG-STANDING VALUE

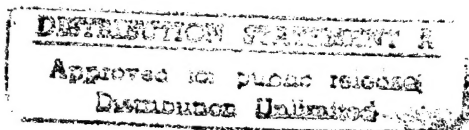
by

Douglas J. Venlet

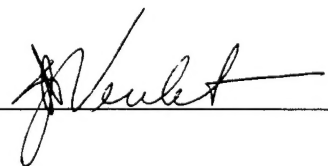
Lieutenant Commander, U.S. Navy

A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.



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## **ABSTRACT**

Since Alexander Svechin coined the term "Operational Art," there has been a need to understand its application. Christened an art, the mind conjures a finished product which is observable, meaningful, organized, and well-orchestrated. Yet, as with visual art, to intelligently analyze it, or better yet produce it, one must become familiar with techniques which serve as practical tools of understanding. Art is mysterious, intangible, and very personal to the artist. How can military leaders from varying backgrounds learn to apply the art in the same way?

Basic concepts of artistic design can assist. They do not serve to redefine Operational Art or its familiar terminology. But the aspects of art, the elements of composition, and the principles of design do serve as basic building blocks to which the military artist can compare. Most importantly, the principles of design are unchanging no matter the form of art -- music, literature, or painting. If the application is universal to all forms of art, should they not apply to Operational Art? This paper proposes they do, and sequentially outlines how the artist's method of approach can serve as a conceptual model of understanding for the Operational Artist.

*"One who has some artistical (sic) ability may know how to do a thing, and even show how to do it, and yet fail in doing it after all; but the artist and the man of some artistic ability must not be confounded. He only is the former who can carry his most shadowy precepts into successful application."*

*Edgar A. Poe*

## **INTRODUCTION - CREATING A CONCEPTUAL FRAMEWORK**

*"The object of art is to crystallize emotion into thought, and then fix it in form."*

*Francois Delsarte*

Military officer corps training leads the astute from commissioning to tactical proficiency in a few short years. Hard earned, this groundwork consistently proves a key ingredient in America's victory pie across the range of military operations. Yet, for those whose scope broadens beyond the near horizon, there is a need to understand the linchpin tying strategic vision to tactical success.

Effective application of the "Operational Art" helps America win wars. Saddam Hussein learned this lesson; General H. Norman Schwarzkopf taught him. Clearly, a military and civilian leadership schooled in the Operational Art enables nations to find militarily achievable end states in time of conflict. Yet, it is a concept not clearly or easily understood.

In fact, our armed forces are taught it must be applied by each in his own way. Numerous components are presented as contributors to the essence of the Art, but no definitive formula is available to help in the practice of it -- perhaps because it is abstract and ethereal. To many, it seems a "know it when you see it" phenomenon, the machinations of which remain a mystery. What then, is to be done?

A conceptual model of understanding can help one visualize the essence of Operational Art. As the well-known "Karate Kid" learned the techniques of martial art blocking movements by conceptualizing the "wax on, wax off" movement, so too can disciplined and structured military tacticians learn the essentials of Operational Art by applying long-standing artistic principles. Granted, there is no recipe for military victory, as there is no rule book for creating a work of art. For both, the variables are most often too

great. Yet, an understanding of the aspects of art, the elements of artistic composition, and the universal principles of design by which the artist is governed serve as a comparative tool for the Operational Artist. They establish a plausible framework into which primary components of Operational Art can be placed.

This is a model of understanding which simplifies the difficult. It does not present a new lexicon for Operational Art. An understanding of the concepts presented should enable our nation's Operational Artists to realize they can "paint" other than by number, or, if necessary, "outside the lines." A comparative model using General Schwarzkopf's Desert Storm success as guide will place this thesis in perspective, and will demonstrate that the methodology of an effective Operational Artist may be patterned after that of the visual artist.

### **ASPECTS OF AN ARTWORK**

*"When art is understood by everybody, it will cease to be art."*

*Arsene Houssage*

A successful artist brings all aspects of art together in order to create a balanced objective. As the author of the leading quotation implies, the synthesis of these aspects defines the truly creative artist and sets him apart from his audience. For the operational commander, these unchanging aspects of art are appealing. Strong consideration of each when planning an operation will provide a solid foundation for further detailed planning. Allowing some creative license, analogies to recognized Operational Art terminology are made to act as facilitators to understanding. Each aspect will briefly be paralleled, then described more fully in the Desert Storm model. First, this study will sequentially step through the thought process every artist undergoes when evaluating or creating a work of art.

The five aspects of any artwork are:

- function* - the purpose of the artwork;
- personality of the artist* - what the artist brings to the work;
- cultural milieu* - the cultural impact on both the artist and his artwork;
- form* - the shape or structure the artwork will take; and
- material* - the tools necessary to create the form.<sup>1</sup>

## **Function**

To gain insight into a work of art, an artist must become familiar with its function - its ultimate purpose. Some of the many purposes of art include education, expression of a human condition, commemoration, or creation of a diversion. Sometimes an artist may incorporate more than one purpose into his work.<sup>2</sup> Murals on buildings or highway overpasses in many inner cities relate the cultural nuances of the neighborhood in which they appear - they serve to both educate and express a human condition. Art may also serve as propaganda against the horrors of war such as Goya's famous painting of the "Firing Squad." His prints on the *Disasters of War* epitomize scenes of violence and war during the French invasion of Spain in 1808.<sup>3</sup> Thus, the function of art is connected with social, economic, political and religious patterns of its time period, but *most* importantly -- it defines an artwork's purpose.

This aspect of art neatly parallels the *guidance* provided to or by the operational commander. Both political and operational direction helps define "victory" and gives meaning to the "work of art."

## **Artist's Own Personality**

The individual artist brings his human life experiences to the creative process. Among other things, these include his attitudes, cultural background, upbringing, and education. Every great creative artist stamps his own personality and ideals on his art. At the same time, he conveys his message through a medium of style accepted by his age. Although all artists are to a certain degree the children of their age, "every *great* artist helps to *create* his age."<sup>4</sup> Artistically, Picasso moved us to the realm of Cubism and modern artistic display. Militarily, General George S. Patton moved us to the age of tanks and mechanized warfare. Both were great artists who looked ahead of their time, saw changes, and applied them.

History is replete with examples of military personalities whose unique leadership style, creative instincts and boldness impacted the nature of a military campaign. As with creative artists, the personality of the operational artist is often reflected as a distinguishing trademark. His background, sense of daring, willingness to take risks, organizational abilities,

and personality all impact upon and reflect his effort, and are key ingredients of effective *Operational Leadership*.

### **Cultural Milieu**

This aspect of art is dominated by inheritances from the past. Through history artistic expression has been determined by social factors. The class holding the economic, political, or religious balance of power most often imposed its likes and dislikes on the rest of society.<sup>5</sup> Naturally, artists fell under this influence. Forces brought to bear on any individual artist have always played an important role in his creative output.

Likewise, the Operational Artist is the product of *his* age. The "100 Hour War" established a "threshold" beyond which he can no longer "plan" to go. America's low tolerance for casualties adds pressure to plan a "clean," precise war. The age of short wars is upon us. Anything else will not do. Yet even with evolving technologies and procedures, many of today's lessons are learned from the past. To be *most* effective, the Operational Artist must achieve a balance. He must learn "how to gather the blazing light of history into his prism and then distort it to his ends."<sup>6</sup> In other words, he must learn to *manipulate* the prism to focus the light from yesterday's lessons through today's capabilities and onto tomorrow's victories.

### **Material**

The visual artist's materials are the tools of his trade. Paints, pigments, thinners, surfaces, and brushes all merge at various times to create an artwork. The artist selects his tools with both the creative effect he seeks and his finished product in mind. In like manner, the Operational Artist must consider all forms of combat power and carefully apportion available resources. As the painter considers an appropriate mix of tools prior to commencing his work, so too must the operational commander, always considering his objective.

### **Form**

Form designates the shape or mass of an object -- a sphere, cone, cylinder, rectangle, or square -- as a part of the whole artwork. A painter creates the illusion of these shapes



(possibly multi-dimensional) with elements of art available to him, such as line and color.<sup>7</sup> The artist then manipulates and develops the objects to fit his overall concept.

This final aspect of art can be paralleled to the commander's *Operational Concept*. Within this framework, the commander expresses his vision of the shape of an operation.

The Operational Artist could consider the above as five pillars on which to plan his operational design. Careful consideration of each will provide a solid foundation on which to build. (Figure 1 portrays sample comparative terminology).

### **THE DESIGN PROCESS**

*"The artist then uses raw materials such as stone, paint, or musical tone. These materials are organized into certain basic elements out of which the artist creates a work of art according to principles of design for an expressive end."<sup>8</sup>*

*"The artist then uses raw materials... (and) organize(s them) into certain basic  
ELEMENTS..."*

Paintings consist of many artistic elements. The most important are line, color, mass, space and texture. These are as important to a painter as words are to an author. By manipulating certain elements an artist can induce mood or emotion. When his elements become fixed, form is created, the essence of design.<sup>9</sup>

Operational Art contains many elements too. Due to differences in meaning however, it is difficult to make direct comparisons between elements of visual art and Operational Art. Yet, in concept, each element of Operational Art is manipulated in much the same way as the elements of visual composition. That is, they serve the same purpose. Suggested parallels follow the definitions below. Two will be demonstrated in the Desert Storm discussion.\*

Line defines form. It is a continuous, unbroken mark or a series of separated points that lead the eye along a path. Here, a parallel can be made to *Lines of Operations*.

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\* The reader may substitute or insert other aspects of Operational Art into these categories as he/she sees fit. The key is, they may or may not be used, or they may be manipulated by the artist throughout the design process.

Color is a sensation produced by excitation of the eye by various stimuli. It expresses emotion and helps the artist tell a story. It provides power. Every color has a complement which can be used to provide balance.<sup>10</sup> It can be wiped off and reapplied differently. I correlate this to *Operational Fires*.

Mass simply expresses the feeling of weight in both visual and Operational Art.

Space is the manipulation of lines, colors, and light and dark areas to give the illusion of multi-dimension on a flat surface. Imagination allows a parallel to *Operational Maneuver*.

Texture refers to the appearance of the painting's surface. The paint may be thick and rough or thin and smooth. It can be adjusted by the artist to affect perception.<sup>11</sup> I correlate this to *Operational Deception*.

Combined, the elements of visual art describe solid objects in three dimensional space. They can be harmonious or in opposition to each other. Normally, they complement each other to provide balance.

***"...out of which the artist creates a work of art according to PRINCIPLES OF DESIGN for an expressive end."***

There are only a few basic principles of design by which every artist is guided. Simply stated, the artist seeks to achieve enough unity and coherence to present a balanced, pleasing objective, and at the same time, attempts to achieve enough variety to avoid monotony. In other words, enough variety to interest the observer, and enough unity to avoid chaos. The challenge then becomes the resolution of the paradox of unity and variety.

This is addressed by two basic principles. The principle of repetition and contrast, and the principle of theme and variation.<sup>12</sup> For the artist, contrast provides variety, while repetition provides unity. Painters achieve contrast by juxtaposing dissimilar elements (such as color, shape or size) to show a degree of difference between parts of a picture. This visual conflict or tension "stimulates interest and spices the composition."<sup>13</sup>

Repetition is the recurrence, succession, or continuation of an object. It can either soothe or irritate. Chinese water torture is an irritating form of repetition which tends to

"exasperate, infuriate, or nauseate."<sup>14</sup> In a soothing painting, repetition creates aesthetic unity. How much variety and unity is necessary depends on the temperament of the artist and the purpose of his design. It is much like salt; governed by taste.

The second way the artist resolves the "unity/variety" paradox is by the principle of theme and variation. The artist uses one theme and builds variations on that theme through the manipulation of the basic elements. Emphasis on certain elements can be used to accent this principle.<sup>15</sup>

Using the principles of design as guidelines, materials and elements create a form which conveys an expressive end.<sup>16</sup> "Formal organization," the composite of all elements, is established. The result is a total picture, and a representation of the artist's vision. Thus, expressive content organizes materials in such a way as to make a work of art *communicate a message*. It is the *message* the artist wants to convey, and is the *most critical element of art*. All others are devices and means to that end. The success of the artwork, whether a Picasso or a campaign plan, is in direct proportion to the achievement of this goal.<sup>17</sup>

Creating a valued masterpiece requires the artist to think ahead, to organize the components of his composition, to visualize his effect even before placing the brush to the canvas, to ensure unity and variety are not only considered, but fulfilled.

The "take-away" concept provided by the elements and principles of design lies in a simple study of Picasso's *Bull's Head*, depicted below.



This artwork consists of no more than the handlebars and seat of an old bicycle. Although not a painting, it serves a descriptive purpose. A visual pun, the handiwork is ridiculously simple.

What is far from simple is the "leap of the imagination by which Picasso recognized a bull's head in these unlikely objects, that...only he could have done."<sup>18</sup> Individually, the materials are mere objects; together, they represent art. Picasso's "finding" is impressive, because the layman would not have thought of it. His materials have little individual artistic significance. Through imagineering with his available elements, he creates a "masterpiece."

Therein lies the *essence* of Operational Art. Each time the Operational Artist adds, changes, or moves an "element," a creative leap is required to incorporate that element into his image of how he is to achieve his objective. If an element cannot be incorporated, it is discarded, modified, fused or in some way manipulated to serve a valued purpose.

These basic descriptions of the elements of composition and principles of design should have a familiar ring to the student of Operational Art. Joint Pub 3-0 states the Art requires "broad vision, the ability to anticipate. (It) looks not only at the employment of military forces but also at the arrangement of their efforts in time, space, and purpose. It focuses on...synchronization of air, land, sea, space, and special operations forces" to accomplish objectives.<sup>19</sup>

The appeal of the aspects and elements of art and its governing principles of design now comes into focus. In the visual arts the forms resulting from certain relationships of the elements and principles such as repetition, contrast, and unity, are essentially identical with the forms in the arts of music, poetry, and literature. These forms have the same basic character and significance and accomplish similar effects. The difference lies in the medium.<sup>20</sup> Since Operational Art is, in fact, an art, then these same relationships should apply. The principles are universal.

Thus, the process by which an artist creates a masterpiece serves as a method of conceptual comparison for the Operational Artist. Like the "wax-on, wax-off" analogy, so too can the aspects, elements, and governing principles enable warriors to understand the process

of operational composition; of effectively bringing resources together to achieve military objectives. Although terminology differs, as a learning tool the technique is germane.

Military leaders must learn, and civilian leadership must understand the process by which "operational tools" are chosen and used to fuse strategic goals to tactical purposes. Creativity must force the leap from "what has always been done" to the untried. As in art, the key to success in military operations will be to develop unity from a multiplicity of options on the operational artist's palette. General Schwarzkopf's Desert Storm success serves as a fine example.

### **DESERT STORM and OPERATIONAL ART**

*"The learned understand the reason of art; the unlearned feel the pleasure." Quintilian*

Americans felt the pleasure of a short war, but most could not evaluate its military success. In the end, it was the result of diverse and complex factors effectively joined together in time and space resulting in a tremendous triumph for joint Operational Art. Facets of the conflict at the operational level serve to validate this paper's thesis, and enable an understanding of how the operational commander developed his masterpiece.

First, the following aspects of art formed the operational planning baseline. (Remember, their effective synthesis leads to truly creative artistry by developing a foundation on which to build.)

General Schwarzkopf had a clearly defined purpose, provided through guidance; his personality and leadership style impacted the design process; cultural and historical influences impacted decisions made and actions taken; and the overall structure of the campaign was formulated with available tools.

### **Function ~ Guidance**

Joint Pub 1-02 defines guidance as "policy, direction, decision, or instruction having the affect of an order when promulgated by a higher echelon." As function describes purpose for the visual artist, guidance provides meaning and definition for the Operational Artist.

Desert Storm's purpose was clearly defined at the national level through four major policy objectives.

1. *Unconditional withdrawal of all Iraqi forces from Kuwait*
2. *Restoration of Kuwait's legitimate government*
3. *Securing the safety and protection of American citizens abroad*
4. *Enhancing the security and stability of Saudi Arabia and the Persian Gulf.*<sup>21</sup>

These objectives, from which the Coalition never waived, provided General Schwarzkopf a foundation on which to formulate his commander's intent:

*Maximize friendly strength against Iraqi weakness and terminate offensive operations with the Republican Guard Force Command destroyed and major U.S. forces controlling critical lines of communication in the Kuwaiti Theater of Operations.*<sup>22</sup>

### **Artist's Personality ~ Operational Leadership**

The nation's political and military purposes clearly and simply defined, the second critical aspect of the artwork lie in the personality of the designer - General H. Norman Schwarzkopf. His personal creed of "duty, honor, country" was inherited from his father, a 1917 West Point graduate. He absorbed the motto's implications early on - many years prior to attending West Point himself. As a young man of 12 he lived in Iran with his father and became a serious student of Arab culture.<sup>23</sup> World War II and Korea impacted his life; Vietnam and Grenada were vivid memories. These early influences shaped his personality as both citizen and soldier. Described more recently by General Colin Powell as

*a burly, brilliant, volatile, six-foot-three bear of a man...a superb troop leader. With the brilliance and the explosiveness that produced the apt nickname 'Stormin' Norman', he was able to weld this babel of armies into one fighting force, without offending dozens of heads of state.*<sup>24</sup>

His unique combination of combat experience and personal convictions resulted in a campaign plan that would prove decisive while minimizing casualties and preserving the force.<sup>25</sup> The personality of the artist was a necessary mix of character and tough-mindedness, predicated by the polish of a diplomat and the savvy of a war hero. His leadership proved to

be the cornerstone of all operational planning.\*

### **Cultural Milieu ~ Cultural and Historical Influences**

Closely related to human life experience is the third aspect of art; cultural factors -- the impact of inheritances from the past. As students of history, military leaders assimilate the rights and wrongs of past wars. The impact of politics, public opinion, and morality is observed. America's military leaders during Desert Storm were largely products of Vietnam. Each had been influenced by a war that taught "one ineluctable lesson...that when politicians become generals, the cause is lost."<sup>26</sup> More importantly, they learned military goals must be achievable and sufficient forces and capabilities must be assigned to the task. By focusing the light from the past through his prism, General Schwarzkopf *demand*ed robust forces and capability to do the job his country was asking him to do.

### **Material ~ Resources**

The fourth aspect of art is material. The nation backed General Schwarzkopf by adhering to the principle of decisive and overwhelming force. It was the catalyst which sent nearly 500,000 American troops to the Gulf region, in addition to forces provided by 30 separate coalition partners. When the President approved the "enhanced option" in October 1990, he enabled the operational commander to seize the initiative and "avoid getting bogged down in a long, inconclusive war."<sup>27</sup> With sufficient resources assembled, General Schwarzkopf had the raw materials to create his masterpiece.

### **Form ~ Operational Concept**

The purpose well defined, the right man on the job, the prism focused, and resources properly apportioned, the final aspect of art to consider was the molding and shaping of all available tools. General Schwarzkopf's Operational Concept provided the framework. Coalition forces were to conduct a coordinated multi-national, multi-axis, naval and ground attack; conduct a strategic air campaign focused on enemy Centers of Gravity (Iraqi National

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\*For the purposes of this study, General Schwarzkopf is presented as the Operational Artist. Operational Artists work at many levels of command, each bringing background and experience to the design process.

Command Authority, NBC capability, Republican Guard Forces command); progressively shift air operations to, and conduct ground operations...to isolate the KTO.<sup>28</sup>

The coalition commander was given the muscle to accomplish his objectives. Through a comprehensive Campaign Plan based on the AirLand battle concept, he gave shape to the entire operation. The foundation established, the artist could now begin to design.

### **ELEMENTS OF OPERATIONAL COMPOSITION**

*"Only by acquiring a knowledge of definite, concrete material on a broadly inclusive base...is one in a position to discern the nature of that mysterious, intangible something which is the essence of art."*<sup>29</sup>

There are numerous elements of operational art which could correspond to the elements of art. Each Operational Artist must know them -- they are his building blocks, his moldable clay, his "bicycle seat and handlebars," his lines and colors. For brevity, a single aspect of Operational Art is described for each of the elements of art. The reader is encouraged to substitute others remembering they may be manipulated, removed, or stressed by the artist to achieve the desired impact.

#### **Line ~ Lines Of Operation**

Line defines form and leads the eye along a path. In like manner, a Line of Operation defines direction -- the path along which maneuvers and engagements take place. As seen in figure (2), the Lines of Operation for the ground war gave definition to the campaign. The "left hook" enabled the coalition to encircle and cut off fleeing Iraqi troops.<sup>30</sup>

#### **Color ~ Operational Fires**

Color adds power to an artwork, resulting in an emotional impact. Operational fires does the same for the military artist. There are numerous Desert Storm examples which demonstrate this element. The most dramatic took place on the initial day of the ground war when I MEF encountered the strongest concentration of enemy forces in the theater. A combined effort by M60A1 tanks, TOW equipped High Mobility Multi-Wheeled Vehicles, and heavy artillery destroyed numerous Iraqi T-55 and T-62 tanks. Supported by the 3rd



Marine Air Wing's CAS and interdiction fires, this application of firepower had a *decisive* impact on the outcome of the entire operation. It diverted the attention of the Iraqi high command leaving them oblivious to Coalition activity to the west, and added a critical dimension to the overall "composition."<sup>31</sup>

### **Space ~ Operational Maneuver**

Space involves the manipulation of elements in order to add dimension. Operational maneuver allows the Operational Artist to accomplish the same goal. The greatest Desert Storm example occurred after the air campaign gouged out Saddam Hussein's "eyes" -- his air force. The longest and largest movements of combat forces in history took place in order to reposition and gain the advantage.<sup>32</sup> From their original staging area south of Kuwait, 270 thousand troops and their supplies moved west -- XVIII Airborne Corps moved 250 miles and VII Corps moved 150 miles (see figure 3). Their mobility enabled them to move 24 hours a day for more than three weeks prior to the day the ground offensive began. C-130's contributed by lifting supplies and other aircraft with special bladders delivered fuel. This movement secured the operational advantage of position. It added yet another dimension from which Coalition forces could mount their attack.<sup>33</sup>

### **Texture ~ Operational Deception**

In art, texture affects perception; it is the appearance of the painting's surface. As it is manipulated by the artist, so too may the Operational Artist manipulate the enemy's perception. Through OPDEC the Coalition indicated the point of main attack as Kuwait, via amphibious assault. Numerous feints and amphibious demonstrations led the Iraqis to reinforce their seaward flank. Although not initially intended as a deception plan, the Marine presence and capability blinded the enemy to a critical vulnerability -- his rear. He was only able to see the smooth surface of the artwork.

As previously stated, these elements of art may be manipulated to give meaning, provide impact, or elicit a response. Combined, they form a *work of art* by adhering to the principles of design.

## PRINCIPLES OF OPERATIONAL ART AND DESIGN

*"Discussion without definition is useless." Lord Grey*

The above elements are of no artistic value individually. Each resembles Picasso's bicycle seat. Without the handlebars they are mere objects. Combined with other elements however, they begin to define the overall form of an operation. Adhering to the principles of design, the operational commander makes the combinations necessary to achieve overall unity of effort. In the desert, unity was possible because elements of the operation were dynamically employed according to the principles of design.

The most critical thing to remember about the principles of design is they are not independent of each other -- they are mutually dependant one on another. "All works of art employ dynamics to some degree and many combine the theme and variation principle with that of repetition and contrast."<sup>34</sup> Two of the previously mentioned elements of Desert Storm will demonstrate these dynamics.

First, it is important to visualize the dynamic nature of the principles of design. As seen in the picture below, a soldier and a factory worker are juxtaposed. Artistic application of the principles of repetition and variation is depicted. Shapes are repeated, but the objects are varied. This is called varied repetition, or harmonious repetition and is used in all forms of art to provide unity with interest.<sup>35</sup>



*"GIVE 'EM BOTH BARRELS," WAR POSTER BY JEAN CARLU*

*Repetition of Shape with Variation of Object, Size, and Value. In this design—based on repetition of the foreground by the background—the foreground figure dominates by stronger value contrast, and by slightly larger size (Courtesy of Division of Information, O. E. M., Washington, D. C.)*

The operational artist does the same thing. For this study, the repetition of Operational Fires with a variation of lines of operations demonstrate this concept.

### **Repetition of Color with the variation of Line ~**

#### **Repetition of Operational Fires with the variation of Lines of Operations**

For the visual artist, repeating the element of color establishes dominance. This color dominance gives the artwork an overall feeling of unity.<sup>36</sup> Adding lines may provide a sense of direction or cause the eye to move to a focal point. Similar effects occur for the Operational Artist.

The Operational Fires example presented on page 12 was the *individual* effort of I MEF. But actions of this nature occurred across the entire battlefield from the XVIII Airborne Corps in the west, to the VII Corps in the center, to the Joint Forces commands in the east. Sizes of the forces varied but the repetitive nature of the Operational Fires brought to bear was akin to the Chinese water torture described earlier. Adding to this was variation of Lines of Operations. Initially, there was little variation of line -- all forces paralleled each other on the march north. Once objectives were achieved however, Lines of Operations shifted for some forces resulting in the encirclement of Kuwait.<sup>37</sup> These varied lines combined with repetitive Operational Fires was a clear demonstration of Unity of Effort -- a prime essential of Operational Design. Chaos was avoided in the desert because unity was manifestly evident.

Additional examples would show how the principles of Contrast and Theme were also factored into the design. In the end however, the operational commander achieved a synergy through synchronized actions of air, land, sea, and special operations and space forces.

Enough suggestions have been made to relate the idea of the basic elements and principles of design in visual art as compared to those in Operational Art. As in visual art, it is important to remember that everything cannot be grasped at once and that all elements are not always of equal importance. To know how they work, how they can be combined, and the affect that combination will have is of quintessential importance.

## CONCLUSION

*"Art is a creative effort of which the wellsprings lie in the spirit, and which brings us at once the most intimate self of the artist and the secret concurrences which he has perceived in things by means of a vision or intuition all his own, and not to be expressed in ideas and in words - expressible only in the work of art." Jacques Maritain*

The quotation sums up the essence of art. It begins with a vision, and is expressed in something observable. Today's officer corps must understand the impact Operational Art will have on tomorrow's conflicts. It is not a fad -- it will not disappear with new technology or a new breed of leadership. As the long-standing aspects of art, elements of artistic composition and principles of design guide the visual artist, so can they guide the Operational Artist. The key is to understand it is a *process* requiring the artist to communicate a message; to have the observer (own forces *and* the enemy) feel the message, understand its impact, and understand the purpose of the artwork. It is done by injecting one's own personality and background into the work, skillfully sifting through the cultural and historical influences which will impact war planning efforts, and melding the forces made available from the nation's quiver. It is the masterful combination of these forces which culminates in the Operational Artist's expressive end. Although Desert Storm conditions may never be duplicated again, the artistry demonstrated was revealing and magnificent.

To learn the arts, one must gain insight by being both a "hearer" and a "seer". The musician or artist spends hours in the concert hall or the art museum until themes are indelibly impressed upon the memory. This laboratory of experience provides the theoretical background from which artisans develop their trade.<sup>38</sup>

In like manner, the military artist must learn through experience and exposure. He must be able to focus that knowledge to an expressive end. As Edgar Allen Poe reminded us earlier, the *true* artist must successfully apply his art.

Understanding the essence of Operational Art is not difficult. As we have seen, a conceptual aid helps the "process" seem methodical and easy. Most importantly, it is the touch of the artist, the ability to take the imaginative leap, and knowing when to do the

mysterious, intangible something that is the essence of art, which results in a masterpiece of long-standing value.

Figure (1)  
**Table of Comparative Features**

**Aspects of Artwork**

Function  
 Artist's Personality  
 Cultural Milieu

Material  
 Form

**Elements, factors or dimensions  
 of a composition**

Line  
 Color  
 Mass  
 Space  
 Texture

**Principles of Design**

Unity  
  
 Variety  
  
 Repetition  
  
 Contrast  
  
 Theme  
  
 Variation

**Aspects of Operational Art**

Guidance/Objectives/Purpose  
 Operational Leadership  
 Cultural Impacts on  
     Planning/Execution  
 Resources/Apportionment  
 Operational Concept

**Elements factors or dimensions  
 of an operational concept**

Lines of Operations  
 Operational Fires  
 Mass  
 Operational Maneuver  
 Operational Deception

**Principles of Operational Art**

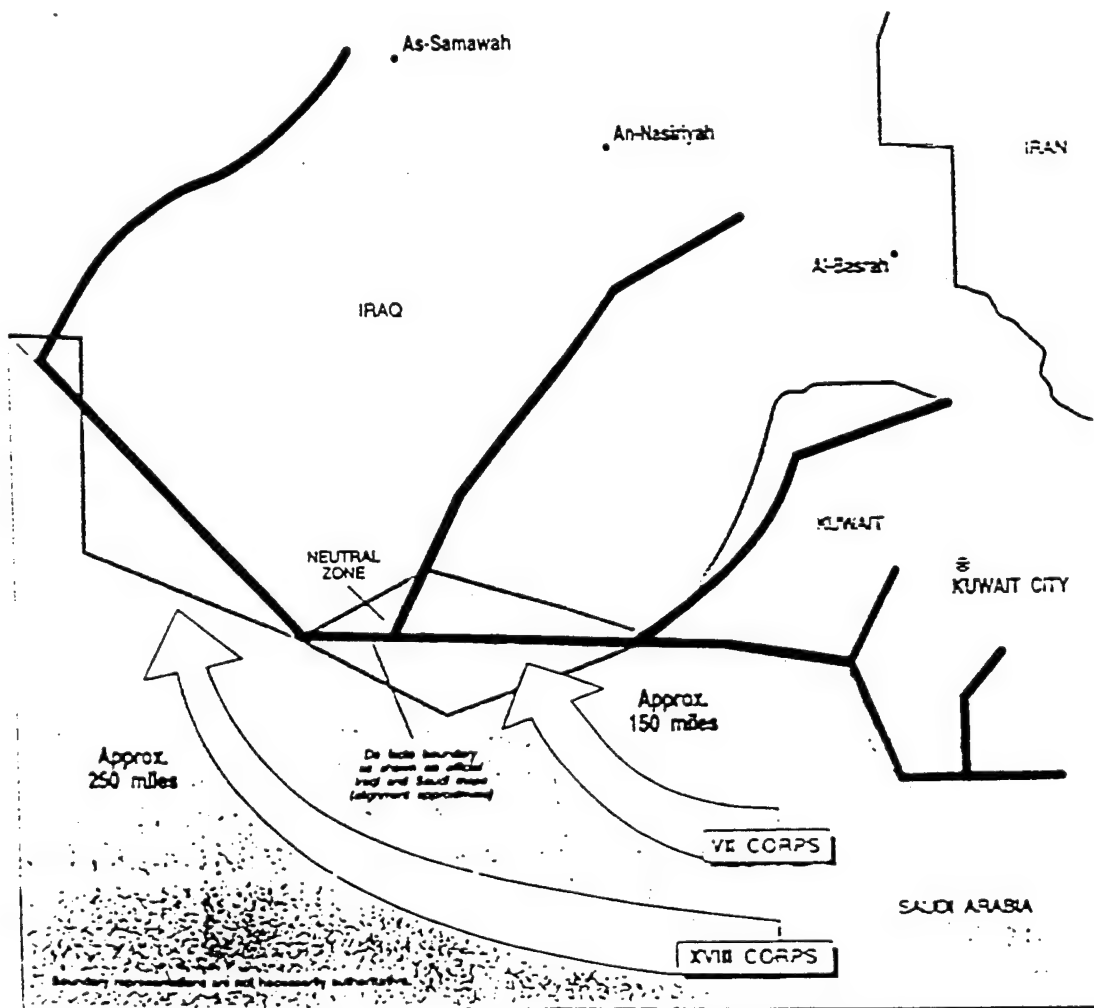
Unity of Effort/Command  
  
 Synergy/Branches/Sequels  
  
 Timing/Tempo/Sequencing/  
     Momentum  
  
 Imbalance/Asymmetry  
  
 Balance/Consensus/Sustainment/  
     Coordination  
  
 Arranging Ops/Synchronization/  
     Phasing



Figure (3)

Operational Maneuver

**The Shift West**



From U.S. Department of Defense, Conduct of the Persian Gulf War, p. 341-342.



## NOTES

*"The imagination voyaging through chaos and reducing it to clarity and order is the symbol of all the quests which lend glory to our dust." John Livingston Lowes, The Road to Xanadu*

1. Milo Wold. An Introduction to Music and Art. (Dubuque: William C. Brown Publishers 1980), 8.
2. *ibid.*, 5.
3. This painting is actually entitled "May 3, 1808". Wold, 234.
4. *ibid.*, 4.
5. *ibid.*, 2-3.
6. William Manchester. The Last Lion. Winston Spencer Churchill: Visions of Glory 1874-1932. (np: Little, Brown and Company 1983), 4.
7. Wold, 18.
8. Wold, 10.
9. Maitland Graves, The Art of Color and Design. (New York: McGraw-Hill Book Company 1951), 18.
10. Carole Katchen. Painting With Passion. (Cincinnati: North Light Books 1994), 40.
11. Graves, 419. All definitions from Glossary.
12. Maitland Graves. The Art of Color and Design. (New York: McGraw-Hill Book Company 1951), 18.
13. Graves, 53.
14. Graves, 111.
15. Wold, 13.
16. *ibid.*, 18-19.
17. *ibid.*
18. H.W. Janson. History of Art, (Englewood Cliffs: Prentice Hall, Inc., Oct 1962), 10.

19.U.S. Joint Chiefs of Staff. Joint Pub 3-0. Doctrine for Joint Operations. (Washington, D.C.: GPO, February 1995), II-3.

20.Graves, 17.

21.Harry G. Summers. On Strategy II: A Critical Analysis of the Gulf War, (New York: Dell, 1992), 162.

22.U.S. Department of Defense. Conduct of the Persian Gulf War: Final Report to Congress, (Washington, D.C.: GPO, April 1992), 231.

<sup>23</sup> Norman Schwarzkopf with Peter Petre. It Doesn't Take a Hero, (New York: Bantam, 1992), 46 (large print edition).

24.Colin Powell, My American Journey. (New York: Random House, Inc., 1994), 382 and 475.

<sup>25</sup> Douglas W. Craft. An Operational Analysis of the Persian Gulf War. (Strategic Studies Institute, U.S. Army War College, 1992), 11.

26. "Triumph Without Victory: The Unreported History of the Persian Gulf War." U.S. News and World Report. (New York: Times Books, 1992), 71.

27.U.S. Department of Defense. Conduct of the Persian Gulf War: Final Report to Congress, (Washington , D.C. : Government Printing Office, April 1993), xix.

<sup>28</sup> *ibid.*, 97.

29Helen Gardner. Art Through the Ages: An Introduction to its History and Significance. (New York: Harcourt, Brace and Company, 1926), vii.

<sup>30</sup> Conduct of the Persian Gulf War, 412.

<sup>31</sup> *ibid.*, 368.

<sup>32</sup> "Excerpts from Schwartzkopf News Conference on Gulf War." New York Times International, 28 February 1991, A8.

<sup>33</sup> Conduct of the Persian Gulf War. 341-342.

<sup>34</sup> Wold, 13.

<sup>35</sup>Graves, 125.

<sup>36</sup>*ibid.*, 99.

37.New York Times International, A8.

38.Wold, 7-8.

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